

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ALABAMA
SOUTHERN DIVISION**

THE CITY OF IRONDALE,)	
ALABAMA,)	
)	
Plaintiff,)	
)	
vs.)	Case No.: 2:24-cv-01327-GMB
)	
3M COMPANY, INC.; DAIKIN)	
AMERICA, INC., E.I. DUPONT DE)	
NEMOURS AND COMPANY;)	
DUPONT DE NEMOURS, INC.;)	
CORTEVA, INC.; EIDP, INC., THE)	
CHEMOURS COMPANY; THE)	
CHEMOURS COMPANY FC, LLC;)	
SCHOLAR CRAFT PRODUCTS,)	
INC.; TRICON WEAR SOLUTIONS)	
LLC; and GCP APPLIED)	
TECHNOLOGIES, INC.)	
)	
Defendants.)	

DECLARATION OF CHARLES B ANDREWS, Ph.D.

I, **Charles B. Andrews, Ph.D.**, being competent to provide this Declaration,
do declare as follows:

1. My name is Charles Andrews. I am an adult resident of Garrett Park,
Maryland.

2. I am a hydrologist with over forty-years (40) years of experience in the
field. I received a B.A. in Geology from Carleton College in 1973, an M.S. in water
resources from the University of Wisconsin, Madison, in 1974, an M.S. in Geology

from the University of Wisconsin, Madison, in 1976, and a Ph.D. in Geology from the University of Wisconsin, Madison in 1978. I am currently a Senior Principal at S.S. Papadopoulos & Associates, Inc., focusing primarily on difficult water-resource problems, including but not limited to the assessment and remediation of contaminated sites; formulation of water-resource projects; assessment of surface-water and groundwater flow and quality conditions at hazardous waste sites; design of water remediation systems; development of new and modification of off-the-shelf numerical simulation models for adaptation to specific field projects; and providing guidance in to significant water-rights litigation cases.

3. A recent focus of my practice has been the study of per- and polyfluoroalkyl substances (“PFAS”) contamination, including the disposal of PFAS and migration of PFAS into groundwater and surface water from manufacturing facilities and disposal sites. I have evaluated PFAS contamination in other notable cases, including:

- *State of Minnesota et al. v. 3M Company*. Case No. 27-CV-10-28862, Hennepin County Superior Court, (4th Dist., Minn. 2018).
- *City of Rome v. 3M et al.* Case No. 19-CV-V02305JFL003, Superior Court of Floyd County (Ga. 2019).
- *The Water Works and Sewer Board of the City of Gadsden v. 3M Company et al.* Case No. 31-CV-2016-900676.00, Circuit Court of Etowah County, Alabama.

- *The Water Works and Sewer Board of the Town of Centre v 3M Company, Inc., et al.* Case No. CV-2017-900049, Circuit Court of Cherokee County, Alabama.

- Earl Parris, Jr. v. 3M Company, et al. Case No. 4:21-CV-40-TWT, U.S. District Court for the Northern District of Georgia, Rome Division.

- *The City of Muscle Shoals, Alabama, et al. v. 3M Company, et al.* Case Number: 3:24-CV-01062-LCB, United States District Court for the Northern District of Alabama.

- *Colbert County, Alabama, et al. v. 3M Company, Inc., et al.* Case Number: 3:24-CV-01063-LCB, United States District Court for the Northern District of Alabama.

4. I have been retained by counsel for Plaintiffs in the above-referenced case, *The City of Irondale, Alabama, et al. v. 3M Company, et al.*, Case 2:24-CV-01227-GMB (U.S. District Court, Northern District of Alabama, Southern Division) and in *The City of Irondale, Alabama, et al. v. 3M Company, et al.*, Civil Action No. 01-CV-2024-903343.00 (Jefferson County Circuit Court, Alabama), to evaluate and opine on the PFAS contamination detected in four drinking water supply wells operated by the Irondale Water System -- a department of the City of Irondale. These water supply wells are reported to have been completed in water-yielding units within the Bangor Limestone and/or older formations including the Hartselle Sandstone and Fort Payne Chert.

5. I evaluated the results of water quality sampling for PFAS in the City of Irondale's wells, groundwater characteristics in Jefferson County, and potential sources of PFAS in the Irondale area. In forming my opinions, I relied on the

following documents, as well as my extensive education, training, and experience in hydrology, PFAS fate and transport, and PFAS-contaminated site investigation and remediation:

- a. The Complaint filed on August 23, 2024 in *The City of Irondale, Alabama, et al. v. 3M Company, et al.*, Civil Action No. 01-CV-2024-903343.00.
- b. The Notice of Removal filed on September 27, 2024 in this matter.
- c. Publicly available documents from the Geologic Survey of Alabama, the Alabama Department of Environmental Management, and the U.S. Geologic Survey.
- d. A source water assessment prepared for the City of Irondale.

6. Based upon my review of the above documents, it is my understanding that the PFAS, including the perfluorooctanoic acid (“PFOA”) and perfluorooctanesulfonic acid (“PFOS”), are present in Irondale’s Well #2 and Well #5 at concentrations greater than the Federal Maximum Contaminant Levels for these compounds, as set by the U.S. Environmental Protection Agency.

7. The Notice of Removal, dated September 27, 2024, alleged that the PFAS in the City of Irondale’s wells just as plausibly resulted (at least in part) from the use of aqueous film-forming foams (“AFFF”) at the Air National Guard Base at the Birmingham-Shuttlesworth International Airport. This base is located on the

north side of the airport, approximately 3.2 miles to the northwest of the City of Irondale's wells.

8. Based upon my review of publicly available documents related to groundwater conditions in the vicinity of the City of Irondale and the Air National Guard Base, it is my opinion that it is not plausible that the PFAS contamination in the City of Irondale wells originated from releases of AFFF at the Air National Guard Base. There is no groundwater flow pathway from beneath the base toward the City's wells.

9. Absent a groundwater flow pathway from the Air National Guard Base to the City of Irondale's wells, it is implausible that the PFAS in the wells resulted in part or in its entirety from releases of AFFF at the Air National Guard Base.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

This the 2nd day of October, 2024.



Charles Andrews, Ph.D.